**2. (Currently amended)** The method for driving a solid-state image pickup device according to Claim 1, wherein the electric potential of said electric potential barrier during the read-out step is raised up by a voltage greater than 0.4.V.

**3. (Currently Amended)** The method for driving a solid-state image pickup device according to Claim 1, wherein said signal charges are read out from said photo-electric conversion units through signal read-out portions and the electric potential of said electric potential barrier during the read-out step is deeper than an ~~adjacent~~ electric potential which is ~~applied,~~ applied in signal read-out portion during the times except said read-out ~~step, to said photo electric conversion units which are adjacent to those which are being read out.~~ step.

**4. (Currently amended)** The method for driving a solid-state image pickup device according to Claim 3, wherein the potential difference between said electric potential of said electric potential barrier during the read-out step and said ~~adjacent~~ electric potential which is applied in said signal read-out portion is greater than 0.4 V.

**5. (Original)** The method for driving a solid-state image pickup device according to Claim 1, wherein each of said photoelectric conversion units is provided with a vertical overflow drain (OFD) structure which excludes the surplus charges by said electric potential barrier by a voltage applied to a substrate of said vertical OFD structure, which comprises the steps of:

cutting off said incident light;

raising up said electric potential barrier;

starting reading out said signal charges.

**6.(Currently amended)** The method for driving a solid-state image pickup device according to Claim 5, wherein the electric potential of said electric potential barrier during the read-out step is raised up by a voltage greater than 0.4V.

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**7. (Currently amended)** The method for driving a solid-state image pickup device according to Claim 5, wherein said signal charges are read out from said photo-electric conversion units through signal read-out portions and the electric potential of said electric potential barrier during the read-out step is deeper than an ~~adjacent~~ electric potential which is ~~applied,~~ applied in signal read-out portion during the times except said read-out ~~step, to said photo-electric conversion units which are adjacent to those which are being read out.~~ step.

**8. (Currently amended)** The method for driving a solid-state image pickup device according to Claim 7, wherein the potential difference between said electric potential of said electric potential barrier during the read-out step and said ~~adjacent~~ electric potential which is applied in said signal read-out portion is greater than 0.4V.

**9. (Original)** The method for driving a solid-state image pickup device according to Claim 1, wherein each of said photo-electric conversion units is provided with a horizontal overflow drain (OFD) structure which excludes the surplus charges by said electric potential barrier by a voltage applied to a gate of said horizontal OFD structure, which comprises the steps of:

cutting off said incident light;

raising up said electric potential barrier;

starting reading out said signal charges.

**10. (Currently amended)** The method for driving a solid-state image pickup device according to Claim 9, wherein the electric potential of said electric potential barrier during the read-out step is raised up by a voltage greater than 0.4V.

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**11. (Currently amended)** The method for driving a solid-state image pickup device according to Claim 9, wherein said signal charges are read out from said photo-electric conversion units through signal read-out portions and the electric potential of said electric potential barrier during the read-out step is deeper than an ~~adjacent~~ electric potential which is ~~applied,~~ applied in signal read-out portion during the times except said read-out ~~step, to said photo-electric conversion units which are adjacent to those which are being read out.~~ step.

**12. (Currently amended)** The method for driving a solid-state image pickup device according to Claim 11, wherein the potential difference between said electric potential of said electric potential barrier during the read-out step and said ~~adjacent~~ electric potential which is applied in said signal read-out portion is greater than 0.4V.

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## IN THE DRAWINGS

Please replace Figs. 7 to 11 originally filed with Figs. 7 to 11 enclosed with this amendment, subject to the approval of the Examiner. Please add new Fig. 12 enclosed with this amendment, subject to the approval of the Examiner.